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Effectiveness of a Video-Assisted Teaching Program on Knowledge Regarding Early Identification and Management of Polycystic Ovarian Disease (PCOD) Among Young Adults at Sanjay Gandhi College of Nursing, Bangalore

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Abstract

Polycystic Ovarian Disease (PCOD) is an extremely common endocrine disorder among women of reproductive age. It is associated with hormonal imbalances, leading to menstrual irregularities, infertility, and metabolic complications. Early detection and appropriate management of Poly Cystic Ovarian Disease can help prevent long-term health consequences such as diabetes, cardiovascular disease and infertility. This study attempted to measure the effectiveness of a Video-Assisted Teaching Program on knowledge related to early identification and management of PCOD among young adults at Sanjay Gandhi College of Nursing, Bangalore. A pre-experimental one-group pre-test and post-test design was used for the study. Simple random sampling was used, and a total of 50 young adults were selected. The knowledge questionnaire was structured and had comprehensive information regarding the causes, symptoms, diagnosis, and management strategies of Poly Cystic Ovarian Disease (PCOD). Data were collected before and after administering the Video Assisted Teaching Program. The results of the pre-test revealed that 94% of the participants had inadequate knowledge with a mean score of 6.34 (31.7%). After the intervention, the post-test results had a significant improvement in knowledge, with 44% achieving adequate knowledge and a mean score of 15.3 (76.5%). Statistical analysis using a paired t-test indicated that the Video Assisted Teaching Program was highly effective, with a t-value of 2.42, significant at $p < 0.05$. In addition, significant associations were found between the pre-test knowledge scores and selected socio-demographic variables, such as year of study, socio-economic status, and parental education. The results indicate that video-assisted teaching is an effective educational tool to raise the awareness and understanding of Poly Cystic Ovarian Disease (PCOD) among young adults. The study emphasizes the need for incorporating innovative educational strategies like VATP into nursing curricula to improve reproductive health literacy and empower individuals to adopt preventive and management measures effectively. Future studies could explore similar interventions on larger, more diverse populations.

Keywords: Polycystic Ovarian Disorder (PCOD), Video-Assisted Teaching Programme (VATP), Adolescent Health, Young Adults, Knowledge Enhancement.

Introduction

PCOS is the most common endocrine disorder among women aged 18-44 years. It affects approximately 2-20% of this age group. It is one of the major endocrine disorders, affecting 1 in 15 women worldwide. The estimated incidence of PCOS in adolescents is between 11 and 26% (3), and approximately 50% of them are overweight [1].

The term polycystic ovarian disease was first described by Irving Stein and Michael Leventhal as the triad of amenorrhea, obesity, and hirsutism in 1935 when they observed an association between obesity and reproductive dysfunction. Therefore, it is also known as "Stein-Leventhal syndrome" or "hyperandrogenic anovulation" and is the most common endocrine disorder, affecting approximately 2-8% of women of childbearing age. It is now also called "Syndrome 0" and refers to overeating, excessive insulin secretion, and ovulation disorders [2].

Polycystic ovary syndrome is a set of conditions caused by high levels of androgens in women. Signs and symptoms of PCOS include irregular or missed periods, heavy periods, excess body and facial hair, acne, pelvic pain, difficulty getting pregnant, and patches of thick, dark, velvety skin. Associated diseases include type 2 diabetes, obesity, obstructive sleep apnea, heart disease, mood disorders, endometrial cancer, hypertension, dyslipidemia, hyperinsulinemia, and infertility. Although PCOS cannot be prevented, early diagnosis and treatment can help prevent long-term complications such as infertility, metabolic syndrome, obesity, diabetes, and heart disease [3].

The main risk factor for PCOS is family history. There is a strong link between diabetes and PCOS, so having a family history of diabetes may increase your risk of PCOS. Long-term use of the anticonvulsant valproate is associated with an increased risk of PCOS. Girls with low birth weight, as well as a family history of diabetes, premature delivery, cardiovascular disease, hypertension, hormonal imbalance, genetic problems, endocrine diseases, problems with the immune system on weekends, environmental factors, exposure to toxins, are at risk of developing polycystic ovarian disorder [4].

Adolescence is a transitional stage of physical and psychological development that typically occurs between puberty and legal maturity. Adolescence is a time of sense of identity and intimacy. This is the transition from childhood to adulthood, and many serious diseases in adulthood have their origins in adolescence: smoking, sexually transmitted diseases including HIV, and poor diet and exercise habits, for example, lead to illness and premature death later in life [5].

Need for the Study

PCOS is a common health problem that is on the rise among fertile adolescent girls and young women. It is a condition that causes hormone imbalance in females, leading to irregular menstrual cycles and multiple abnormal cysts in enlarged ovaries, resulting in a reduced number of normal eggs and normal ovulation, making it difficult to conceive. If left untreated for a long period of time, it can lead to serious health problems like diabetes and heart disease.

According to a study conducted by the PCOD Society, one in ten women in India suffers from PCOS, a common endocrine disorder in women of reproductive age, and six out of every ten women diagnosed with PCOS are adolescents [6].

A population study found that overt and occult PCOS affected 90% of patients with oligomenorrhea and 37% with amenorrhea or 73% with oligomenorrhea, 21% of infertile couples, and the annual incidence was 247 patients per million of the general population. The annual incidence of infertility due to PCOS per million was 41 for overt PCOS and 139 for occult PCOS (total 180). Of these, 140 [78%] appeared

to respond well to clomiphene, while 40 [22%] did not and required alternative treatments [7].

A survey of adolescent girls and students from several universities across India showed a high proportion of female students with PCOS, with an increase of about 36% in PCOS cases compared to the period 2007-2008, indicating a rapid increase in PCOS cases among women.

A study conducted by the Department of Endocrinology and Metabolism, AIIMS shows that around 20-25% of Indian women of reproductive age suffer from PCOS. While 60% of women with PCOS are obese, 30-35% have fatty liver disease. About 70% have resistance to insulin, 60 to 70% have a high level of androgens and 40 to 60% have glucose intolerance. About 6 to 10% of girls are exposed to the PCOD, they do not even know their presence. In a prospective study of 400 women of childbearing age, 4-4.7% of white women and 3.4% of African-American women were diagnosed with PCOS. Similar figures (4-6 percent) are found in other population groups [8].

A comprehensive community survey was conducted to determine the prevalence of PCOS in 10 schools among 3,443 adolescent girls [15-18 years old], including 339 girls with symptoms of PCOS, who were malnourished [37.6%], normal weight [51.2%], overweight [8.6%], and obese [2.6%]. The lack of consciousness and change of lifestyle is considered to be the main factor that leads to these phenomena [9].

In order to study the age in PCOD diagnosis and compare the danger factors involved in the choice of PCOD, the retrospective study of 58 adolescent girls and adolescent girls is the initial sexual research. It was emphasized that it could occur at the young age of a girl. Therefore, diagnosis and testing should be performed for young girls with risk factors indicating PCOS.

PCOS affects 8-20% of women of reproductive age worldwide. Because there is no universal definition of PCOS, the exact number of women with PCOS in the United States is unknown, but it is estimated to be around 5 million. Most women are diagnosed between the ages of 20 and 30, but PCOS can affect girls as young as 11 before they even have their first period. American scientists report that the prevalence of PCOS may be as high as 11.2% in girls of childbearing age. Within this group, adolescent girls make up the majority, with perhaps 50% of young girls suffering from PCOS [10].

PCOD is the most common endocrinological disorders in adolescence, so it is always necessary to investigate all new relevant data. Early recognition and rapid PCOD treatment in adolescents is important to prevent long -term complications. In all studies above, this study showed that teenagers should receive appropriate PCOD knowledge because they are future mothers and new generations. The lack of knowledge, and the negative attitude toward PCOD among female college students has not taken measures to improve their lifestyle, and the investigator evaluates their knowledge [11].

The researcher has a pivotal role in creating awareness among nursing students about how to identify the symptoms and modification to be brought in order to prevent further complications of PCOD. Hence the researcher felt the Video Assisted Teaching Program will be effective teaching strategy to impact knowledge of PCOD among young adults.

Problem Statement

"Effectiveness of a Video-Assisted Teaching Program on Knowledge Regarding Early Identification and Management of Polycystic Ovarian Disease (PCOD) Among Young Adults at Sanjay Gandhi College of Nursing, Bangalore"

Objectives

- To assess the Pre-test knowledge scores of young adults regarding early identification and management of PCOD.
- To determine the effectiveness of Video Assisted Teaching Program on early identification and management of PCOD by comparing pre-test and post- test knowledge scores.
- To find out the association between pre-test knowledge scores with the selected socio- demographic variables.

Null Hypothesis

H_{01}: There is no significant difference in the level of knowledge between pre-test and post-test scores among young adults regarding early identification and management of PCOD.

H_{02}: There is no significant association between pre-test level of knowledge and their selected socio-demographic variables among young adults regarding early identification and management of PCOD.

Assumptions

- There is a significant difference in the level of knowledge between pre-test and post-test scores among young adults regarding early identification and management of PCOD.
- There is a significant association between pre-test level of knowledge and their selected socio-demographic variables among young adults regarding early identification and management of PCOD.

Operational Definitions

Effectiveness - It refers to the efficiency of the Video Assisted Teaching Program regarding early identification and management of PCOD among young adults.

Knowledge - It refers to the information or awareness about early identification and management of PCOD among young adults assessed by structured knowledge questionaries prepared bythe investigator.

Video Assisted Teaching Program - This refers to the systematically developed Audio-Visual aid prepared by investigator and validated by experts on introduction about female reproductive system, formation of ovaries, meaning of PCOD, causes, symptoms, early identification and management of PCOD.

PCOD - Polycystic Ovarian Disorder refers to hormonal disorder causing enlarged ovaries with small cysts on the cortex.

Young Adults - It refers to the girls and boys aged between 18 to 22 years who are studying in 1st, 2nd, 3rd and 4th year B.sc Nursing of Sanjay Gandhi College of Nursing, Bangalore.

Conceptual Framework

General System Theory

Polit and Hungler states that a “Conceptual framework is the inter related concepts or abstractions that are assembled together in the relevance to the common theme. It is a device that helps to stimulate research and Impetus”.

The present study aims to assess the effectiveness of Video Assisted Teaching Program on knowledge regarding Polycystic Ovarian -Syndrome among young adults. The conceptual frame work for this study

was based on Modified Ludwig Von Bertalanffy's open system theory

A system is set of interacting parts or components with in a boundary that interact among various components to achieve the goal. A system can be individual, families, communities. The fundamental component of system is matter, energy and communication without any one of these components, system does not exist. The system continuously monitors self and the environment for information to guide its own operation.

There are two types of system.

a) A closed system - A closed system does not exchange energy, matter or information with its environment. It receives no input from environment and gives no output to the environment.

b) An open system - Energy, matter and information move into and out of the system through the system boundary. All living systems such as plants, animals, people, families, and communities are open system, since their survival depends on a continuous exchange of energy. They are therefore, in a constant state of change. For its functioning an open system depends on the quality and the quantity of its input, output and feedback. In the present study the concepts can be interpreted as follows,

Open system

In the present study individual is considered as open system.

Input

In this present study input is the assessment of knowledge regarding Polycystic Ovarian Syndrome among nursing students by Video assisted Teaching Program using multiple choice questionnaire with an effect of demographic variables.

Through put

It is the operation phase. It is the process that allows the input to be changed as output in such a way that it can be readily used by the system. In this study during the activity phase the investigator administer Video Assisted Teaching Program.

Output

In the present study the output is comparison of the pre-test and post-test knowledge scores to assess the gain in knowledge on early identification and management of PCOD.

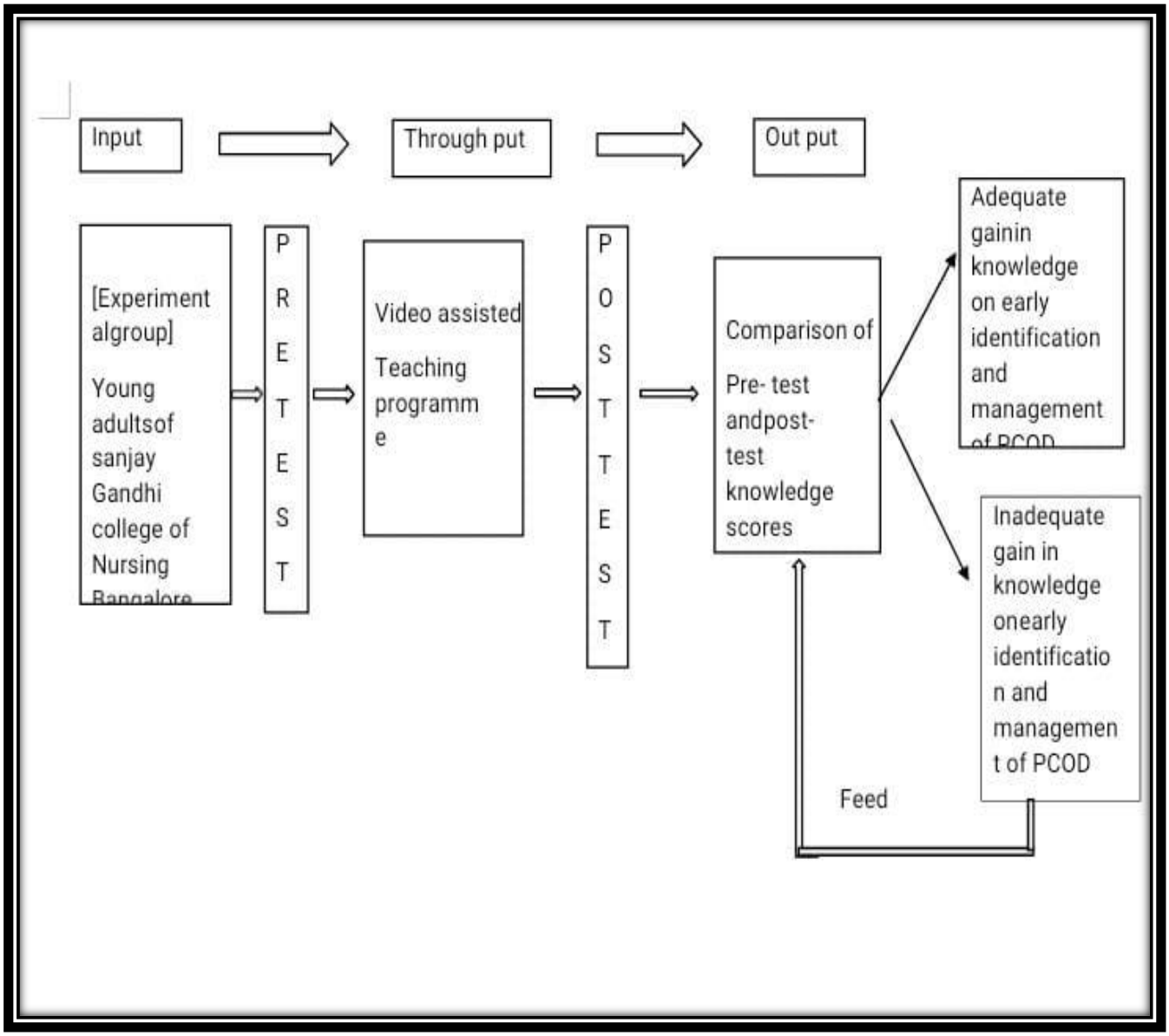

Figure 1: Conceptual Framework based on Von Bertalanffy's Open System Theory.

Review of Literature

Introduction

The review of literature in a research report is a summary of current knowledge about a particular practice problem and includes what is known and unknown about the problem. The literature is reviewed to summarize knowledge for use in practice or to provide a basis for conducting a study.

Review of literature is an essential activity of scientific research project, literature review involves system identification, location securing and summary of written material that information on research problem. Literature was reviewed and organized under following heading:

Studies related to polycystic ovarian disorder

A. Studies related to knowledge of PCOD among adolescent girls.

B. Studies related to effectiveness of education program on level of knowledge regarding PCOD.

C. Studies related to effectiveness of Video Assisted Teaching Program on knowledge regarding PCOD.

A. Studies related to polycystic ovarian disorder.

Nithin Joseph, Aditya G.R. Reddy, Divya Joy, Vishaka Patel (2016), conducted a cross sectional study to assess the proportion of university studies with PCOD among 480 participants in Karnataka state. The study reveals that 39 were already diagnosed with PCOD and 40 were at high risk and 401 were at low risk for PCOD. The study concluded the PCOD is a common disorder among young woman in this setting and these warrants provide screening activities.

Dr. Kalavathi, Dr. Biradar, Dr. Amritha N Shanmanrwadi (2015) conducted a descriptive study to determine the prevalence of PCOD among adolescent girls in Bangalore. The study reveals that majority that is 76.2 % of adolescent were in their late adolescent. Ultrasound report of the adolescent revealed that 30 of them were diagnosed as PCOD. This difference that early statistically significant. The study concluded that early diagnosis and intervention will reduce the long-term health complications associated with PCOD [12].

Beena Joshi, Srabani Mukherjee, Rama Vaidya (2014) conducted a cross-sectional study to assess the prevalence of PCOD among 778 adolescents and young girls aged 15 to 24 years in Mumbai. The study revealed that there is no community-based prevalence data is available for this disorder. The study concluded that PCOD is an emerging disorder during adolescence and screening could provide opportunity to target the group for promoting healthy lifestyle and early interventions to prevent PCOD [13].

Shwetha Balaji, Chioma Amadi, Sathish Prasad, Jyoti Bala Kasav (2014) conducted a cross sectional study to determine urban and rural difference in the burden of PCOD , among adolescent girls aged 12 to 19 years in Vellore, Tamil Nadu. The study revealed that 18% of the participants were confirmed of having PCOD. The study concluded that participants diagnosed with PCOD were higher among urban participants in comparison to rural participants [14].

Prathik Kumar Chatterjee, P. Prassanna Mithra, Raghul Paul (2014) conducted a cross-sectional study to find out the epidemiological correlation among 100 patients with PCOD women in Karnataka. The study revealed that there was significant differences in blood groups along with their age and BMI, diabetes family history were also considered. The study concluded that early screening help for better management prevention of further complications.

Renoto Pasquali, Elisabet Stener - Victorin Bulent O, Yildiz, Antoni J , (2011) conducted to summarize promising areas of investigation into PCOD and to stimulate further research in this area. The study revealed that potential areas of further research activity include the analysis of pre disposing conditions that increase the risk of PCOD, particularly genetic background and environmental factors such as genetic background and lifestyle [14].

B. Studies related to knowledge regarding polycystic ovarian disorder among adolescent girls.

Amal Alessa, Dalal Alied, Sara Almutairi, etc . all (2017) conducted a cross-sectional study to assess the level of knowledge of PCOD among 2000 women of age group of 18 to 50 in Saudi Arabia. The study revealed that the level of knowledge of PCOD was significantly related higher educational level and women with health college qualification. The study concluded that there is a high level of awareness of PCOD among Saudi Arabia.

Jayashree J. Upadhye, Chaitanya A. Shembekar (2017) the study was conducted to assess the knowledge on PCOD among 200 medical students. The data was collected from the students by using structured questionnaires. The study revealed that 33% girls had information from teacher, 19% got information from friends, 11.5% got information from doctor, 3.5% got information from newspaper, 5% got

information from internet, 28% girls were unaware of PCOD. The study concluded that knowledge of the disorder and counselling for adolescents should be included in the curriculum [15].

Sunandha B, Sabitta Naik (2016) conducted a descriptive study to assess the knowledge on the PCOD among 150 student nurses in Mangalore. The study revealed that 76% of the samples were with average knowledge and 10.7% with good knowledge regarding PCOD. The study concluded that source of information, consumption of junk food, dietary food patterns of the student were associated with their level of knowledge on PCOD.

Mr.Kushboo Brar, Ms. Tharundeep Kanur, Mr. P. Vadivukarasi Ramanadin (2016) conducted a descriptive study to assess the level of knowledge regarding PCOD among 200 adolescents girls in Mohali. The study revealed that majority of girls 123 had fair knowledge and minority girls had excellent level of knowledge. The study concluded that there was lack of knowledge of teenage girls regarding PCOD. The administration of information booklet may have helped the teenage girls to understand more about PCOD.

Manita Dalal, Dr. Miss Molli Babu, Ms. Sharadha Rastogi (2014) conducted a exploratory survey design to assess the knowledge and practice of women with PCOD among 275 women of 12 to 14 years age group in New Delhi. The study revealed that prevalence of PCOD among women attended Gynaec OPD of Safdarjung Hospital was found to be 10.09%. The knowledge of women with PCOD regarding PCOD and its management was found to be inadequate with mean score of 12.1 out of 33. The study concluded that was developed for women with PCOD.

C. Studies related to effectiveness of educational program on level of knowledge regarding poly-cystic ovarian disorder

Dr. Anitha Rajendra Babu, Mrs. Mini Abraham, (2015) conducted a pre-experimental 1 group pretest and posttest research design to assess the effectiveness of planned teaching program regarding the knowledge on PCOD among 60 adolescent girls in Chennai. The study revealed that 52 of the adolescent girls had inadequate knowledge and none of them had adequate knowledge on PCOD in pretest. In posttest 7 had moderately knowledge 53 had adequate knowledge regarding PCOD. The study concluded that planned teaching program was effective to create awareness and to increase knowledge among the adolescent girls.

Khushbu Patel (2017) conducted a pre-experimental research design to assess the effectiveness of planned teaching program on PCOD in terms of knowledge and attitude among 60 adolescent girls in Ahmedabad. The study revealed that adolescent have lack of knowledge about PCOD and unfavorable attitude and the knowledge level increased and gain favorable attitude after the planned teaching program. The study concluded the planned teaching program is effective in improving the knowledge and attitude of adolescent girls.

Hoda Abdel Azim Mohammad (2016) conducted quasi experimental study to assess the knowledge on PCOD among 96 students in Egypt. The study revealed that after educational program the majority of students had good knowledge (92.7%). The study concluded that educational program is effective in improving the knowledge of students.

B. Tamilarasi, V. Vathana (2016) conducted a pre-experimental one group pretest posttest design done to assess the effectiveness of structured teaching program on knowledge regarding PCOD among 30 adolescent girls in Chennai, Tamil Nadu. The study revealed that the mean level of knowledge was 11 with standard deviation of 4.88 in posttest there was a statistically high significant difference with paired 't' value of 8.45. The study concluded that there was an increase in the level of knowledge after providi-

ng structured teaching program based on statistical findings [16].

Methodology

Methodology of research organizes all the components of the study in a way that the sub problems that have been pose. This chapter deals with the description of research approach, research design, setting, variables, population, sample and sampling technique, description of the tool, procedure for data collection and the plan for data analysis.

Research Approach:

In the present study an evaluative approach was used to assess the knowledge of young adults regarding early identification and management of PCOD.

Research Design:

Research design is the plan, structure and strategy of investigation answering the research question or blueprint of the entire research study that the researcher selects to carry out. Experimental pre-test and post-test design was adopted for the present study.

Variables

Independent Variables - Video Assisted Teaching Program on early identification and management of PCOD.

Dependent Variables - Knowledge of young adults on early identification and management of PCOD.

Attribute Variables - Age, religion, family structure, locality, marital status, year of studying, socio economic status, father education, mother education, previous exposure to the topic, source of previous knowledge, menarche, number of menstrual days, menstruation.

Criteria for Selection of Sample

Inclusion Criteria

Young adults of Sanjay Gandhi College of Nursing who,

- can read and understand English.
- are willing to participate in the study.
- are available at the time of study.

Exclusion Criteria

Young adults of Sanjay Gandhi College of Nursing who,

- are not willing to participate in the study.
- are not available at the time of study.

Setting of the Study - Sanjay Gandhi College of Nursing, Bangalore.

Population - The population of the present study comprised of young adults at Sanjay Gandhi College of Nursing, Bangalore.

Sample Size - The sample size of the present study consists of 50 young adults at Sanjay Gandhi College of Nursing, Bangalore.

Sampling Technique - Probability simple random (fish-bowl method) sampling technique was used to assign the samples.

Development of the Tool

- A self- structured knowledge questionaries was developed to assess the knowledge of young adults regarding early identification and management of PCOD.
- Video Assisted Teaching Program was developed to provide knowledge regarding early identification and management of PCOD.
- Socio-demographic variables were developed to know the baseline data of young adults.

Description of the Tool

In the present study the tool consists of three parts Section-A, Section –B, Section-C.

Section-A: Consists of selected demographic variables such as Religion, type of family, number of family members, residence, marital status, age, caste, family economic status, father and mother education.

Section-B: Consists of 20 self- structured knowledge questionaries.

Section-C: Consists of Video Assisted Teaching Program.

Scoring Key

Scoring system of participants knowledge was done as follows. Each question had a group of answer points, one point was awarded for each correct answer. Incorrect or I don't know answer scored as zero. Correct responses are summed up to get a total-knowledge scores of each participant.

The knowledge scores were classified as;

- **Poor knowledge:** <50% [the participant scores up to 10 considered to have poor knowledge.
- **Average knowledge:** 50<75% [the participant scored between 10 to 15 considered to have fair knowledge.
- **Adequate knowledge:** >75% [the participant scores more than 15 considered to have good knowledge.

Content Validity of the Tool

Content validity refers to the degree to which the items in an instrument adequately represent the universe of content for the concept being measured.

The tool along with the statement of the problem, objectives was submitted for validation to three experts of Sanjay Gandhi College of Nursing, Bangalore.

Based on the expert's opinion, some of the questions were modified and some of the questions were deleted. The tool was presented and finalized by our research guide.

Reliability

Reliability of the tool was established using split-half method. The calculated 'r' value for structured knowledge questionnaires was 0.91.

Pilot Study

The pilot study was conducted to find the practicability and feasibility of the study. The pilot study was conducted at Sanjay Gandhi College of Nursing Bangalore. The samples for pilot study were 10 young adults aged between 18 to 22 years who are studying in Sanjay Gandhi College of Nursing Bangalore. Young adults were selected using probability simple random sampling technique. The study found to be

feasible. No modifications were made in the tool or methodology after the pilot study. So, the researchers proceeded for the Main study.

Procedure for Data Collection

After taking permission from the college authority, the class teachers of the four classes were explained the purpose of the study and rapport was built up with the students and consent was obtained from them. Briefing was done to the students regarding the questionaries provided to them. This pre-designed, Pre -tested and structured questionaries included topics relating to knowledge about female reproductive system, functions of ovaries, meaning of PCOD, causes, symptoms, risk factors, diagnostic tests, early identification and management of PCOD. At the end of the study, after collection of questionaries from the students, their queries were answered satisfactorily by the research investigator.

Plan for Analysis of Data

The data analysis and interpretation planned to include descriptive and inferential statistics such asmean, mean percentage, standard deviation and paired 't' test to find out the significance of post- test knowledge scores: chi-square test to determine the association between the selected variables and post-test knowledge scores. The significant findings are expressed in the form of tables, figures and graphs.

Descriptive Statistics

- Percentage and Frequency was used to explain demographic variables and pre-test level of knowledge of young adults.
- Mean, mean percentage and standard deviation to analyze the level of knowledge.

Inferential Statistics

- Paired 't' test to find the effectiveness of Video Assisted Teaching Program regarding early identification and management of PCOD.
- Chi-square (x^2) test was used to study the association between pre-test level of knowledge and selected demographic variables.

The significant findings are expressed in the form of tables and figures.

Results

This chapter deals with the analysis and interpretation of data collected to study and assess the "Effectiveness of Video Assisted Teaching Program on knowledge regarding early identification and management of PCOD among young adults of Sanjay Gandhi College of Nursing, Bangalore''. The purpose of this analysis is to identify the knowledge regarding early identification and management of PCOD among young adults, so that the research problems can be studied and tested.

Kerlinger (1976) has defined analysis as "the categorizing, ordering, manipulating and summarizing of data to obtain assumptions, to research hypothesis questions".

The analysis and interpretation of data of this study are based on data collected through structured knowledge questionnaires(N=50). The results were computed using descriptive and inferential statistics based on the objectives of the study.

Objectives of the Study

- To assess the pre-test knowledge scores of young adults.
- To determine the effectiveness of Video Assisted Teaching Program on early identification and management of PCOD by comparing pre-test and post-test knowledge scores.
- To find out the association between pre-test level of knowledge and selected demographic variables.

The data is presented under the following headlines:

Section I: Demographic profile of young adults in Sanjay Gandhi College of Nursing, Bangalore

Section II: Knowledge scores of young adults regarding PCOD by comparison of pre-test and post-test information

Section III: Association of demographic variables with pre-test knowledge of young adults in Sanjay Gandhi College of Nursing, Bangalore.

Section I

Demographic Profile of Young Adults

Table 1.1 : Frequency and percentage distribution of Age, Religion, Family structure, Locality.

SL NO	Variables	Frequency	Percentage (%)
1	**Age(years)**		
	16-18	4	8
	19-20	31	62
	21-22	15	30
	23-24	0	0
2	**Religion**		
	Hindu	49	98
	Muslim	0	0
	Christian	1	2
	Others	0	0
3	**Family structure**		
	Single parent family	1	2
	Nuclear family	41	82
	Joint family	8	16
	Extended family	0	0
4	**Locality**		
	Rural	37	74
	Urban	13	26

Table 1.1- Shows that majority of young adults 3(62%) belongs to the age group of 19-20 years. Majority 49 (98%) of the young adults belongs to Hindu religion. With respect to their family structure majority of the young adults 41 (82%) have nuclear family and only 1 (2%) have single parent family. In relation to locality, majority 37(74%) have rural background and only 13 (26%) are from urban area.

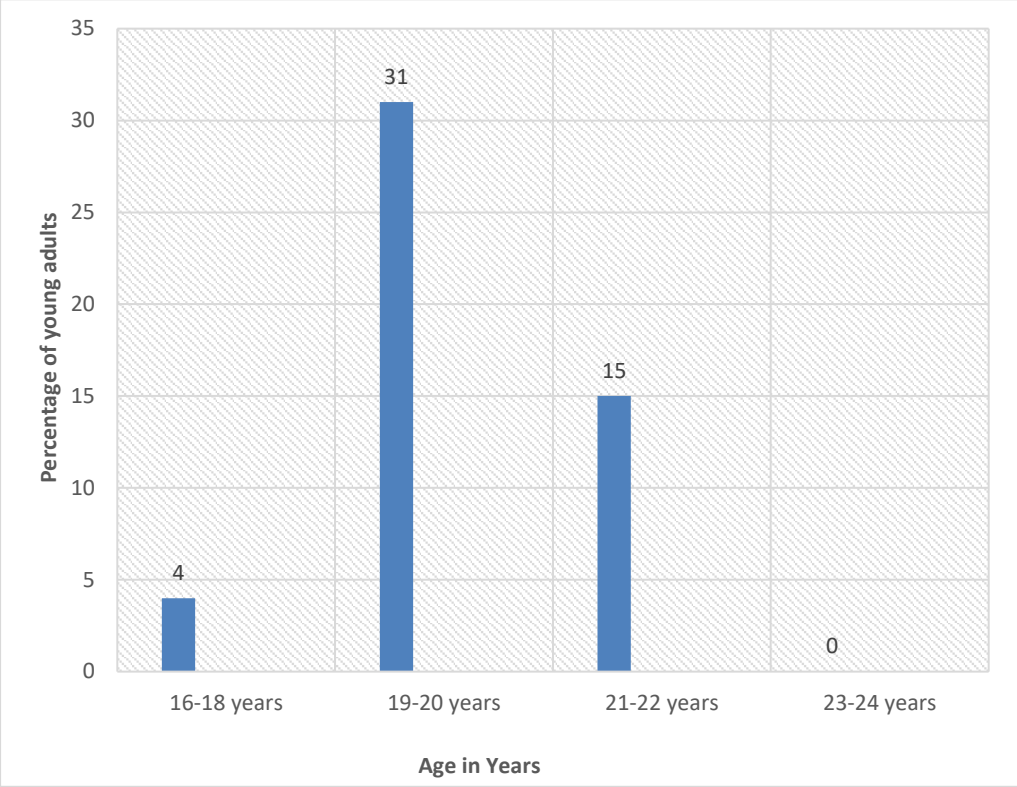

Figure 2 - Frequency and Percentage Distribution of Age.

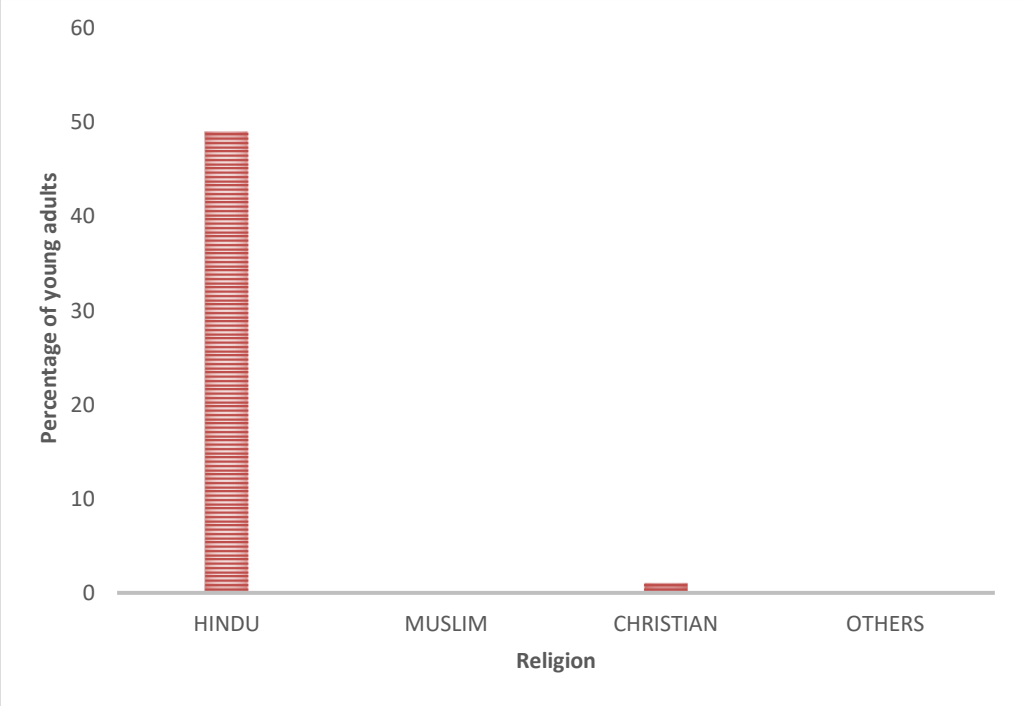

Figure 3 - Frequency and Percentage Distribution of Religion

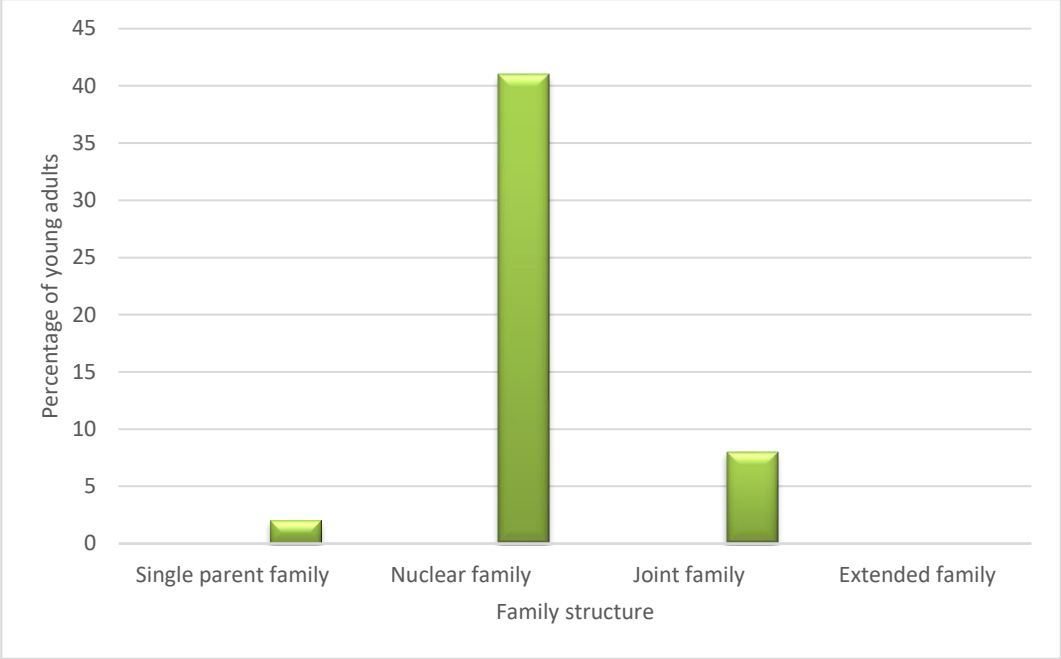

Figure 4 - Frequency and Percentage Distribution of Family Structure.

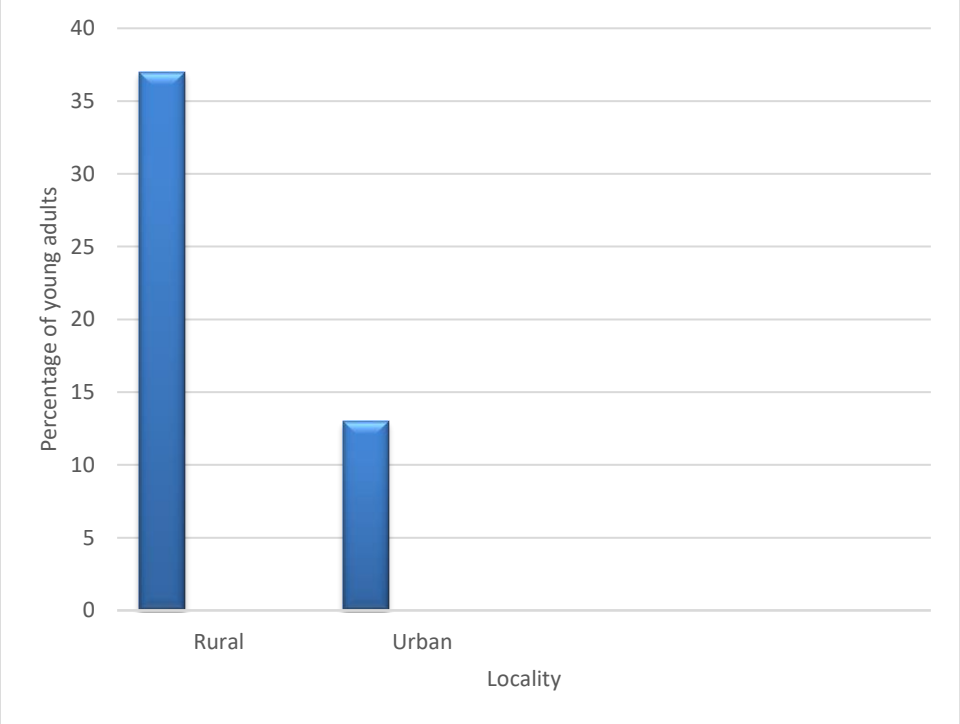

Figure 5 - Frequency and Percentage Distribution of Locality.

Table 1.2 - Frequency and percentage distribution of Marital status, Year of studying, Socio-economic status, Father education.

Sl No	Variables	Frequency	Percentage (%)
1	**Marital status**		
	Married	0	0
	Single	50	100

2	**Year of studying**		
	1st year B.sc (N)	12	24
	2nd Year B.sc (N)	12	24
	3rd Year B.sc (N)	12	24
	4th Year B.sc (N)	14	28
3	**Socio-economic status**		
	Upper	1	2
	Middle	47	94
	Lower	2	4
4	**Father education**		
	Primary/middle school	18	36
	Higher secondary school	19	38
	Graduate	10	20
	Illiterate	3	6

Table 1.2 - shows all the young adults 50 (100%) are single. In regard to year of studying 12 young adults are in each 1st year, 2nd year, 3rd year and 14 are studying in 4th year B.Sc nursing. In relation to socio-economic status majority 47(94%) have middle level of family income. In relation to father education of young adults 19(38%) completed higher secondary education, 18(36%) fathers of young adults studied upto primary level and 10(20%) are educated and 3 are illiterates

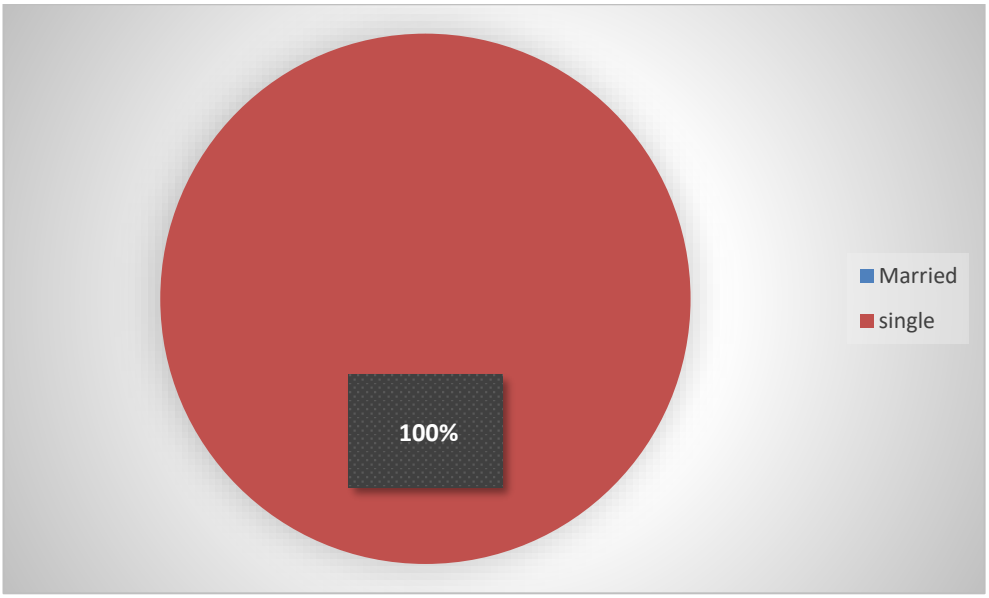

Figure 6 - Frequency and Percentage Distribution of Marital Status

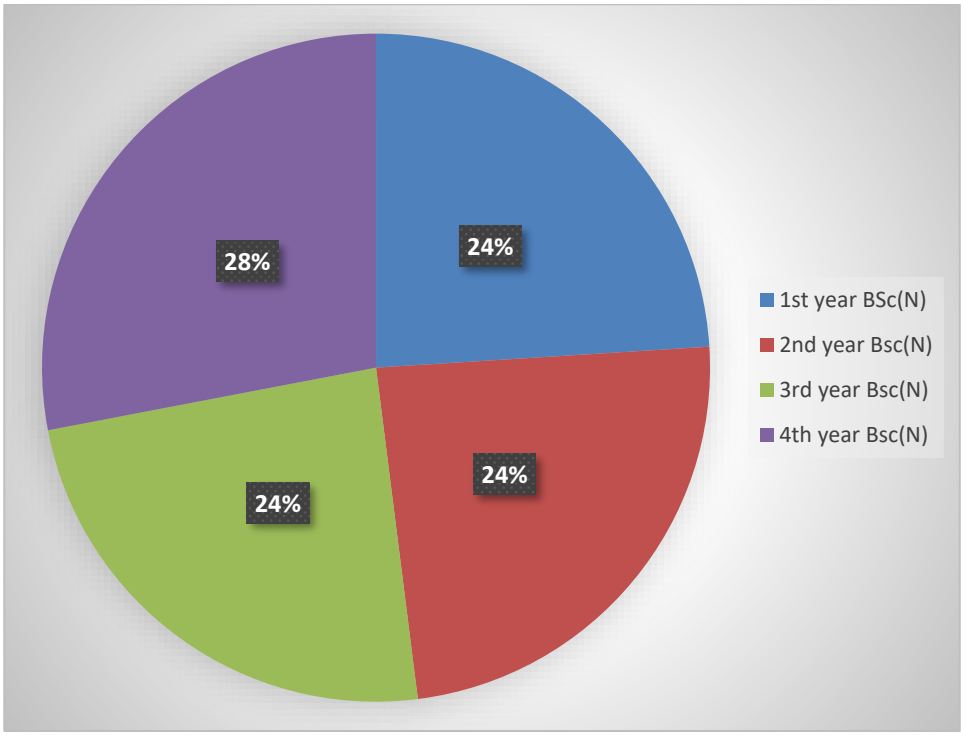

Figure 7 - Frequency and Percentage Distribution of Year of Studying.

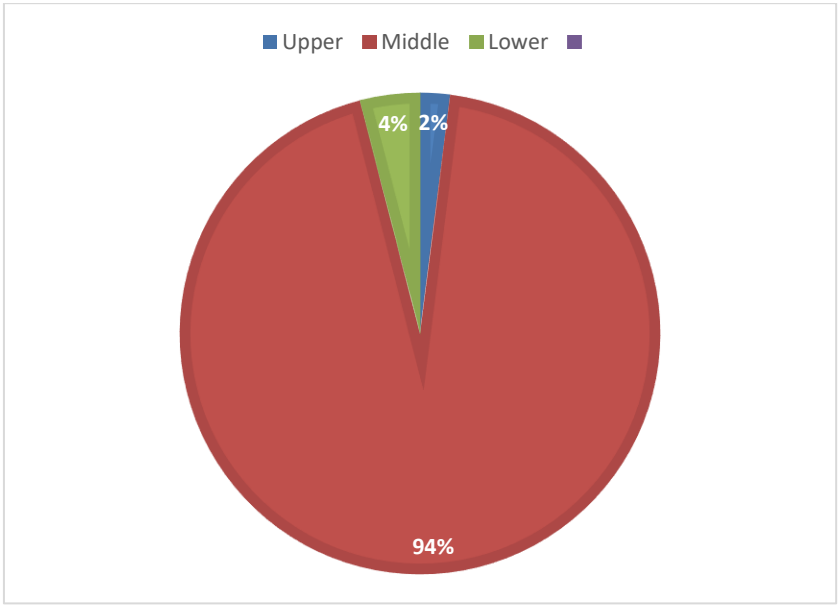

Figure 8- Frequency and Percentage Distribution of Socio-Economic Status

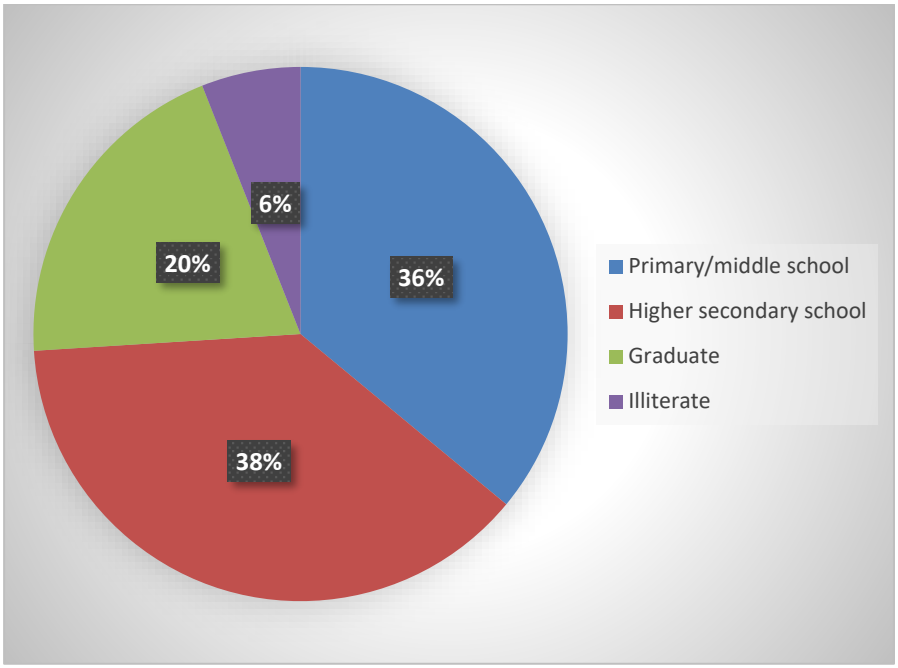

Figure 9 - Frequency and Percentage Distribution of Father Education

Table1.3 - Frequency and percentage distribution of Mother education, Previous exposure, Mode of information, Menarche.

SL NO	Variables	Frequency	Percentage (%)
1	**Mother education**		
	Primary/middle school	18	36
	Higher secondary school	19	38
	Graduate	10	20
	Illiterate	3	6
2	**Previous exposure**		
	Yes	20	40
	No	30	60
3	**Mode of information**		
	Mass Media	0	0
	Relatives	0	0
	Friends	6	12
	Books	14	28
4	**Menarche (Years)**		
	12	8	16
	13	6	12
	14	18	36
	>15	11	22

Table 1.3: shows that 18(36%) mothers completed primary/middle school, 19 (38%) mothers completed higher secondary school,10(20%) are graduates and 3 are illiterates. In relation to previous exposure 20(40%) are previously exposed and 30(60%) are not exposed to the topic previously. In

relation to mode of information 14 got information from books and 6 got information from friends. In relation to menarche most girls 18(36%) got their first menstruation at the age of 14 years and 8(16%) got at the age of 12 years.

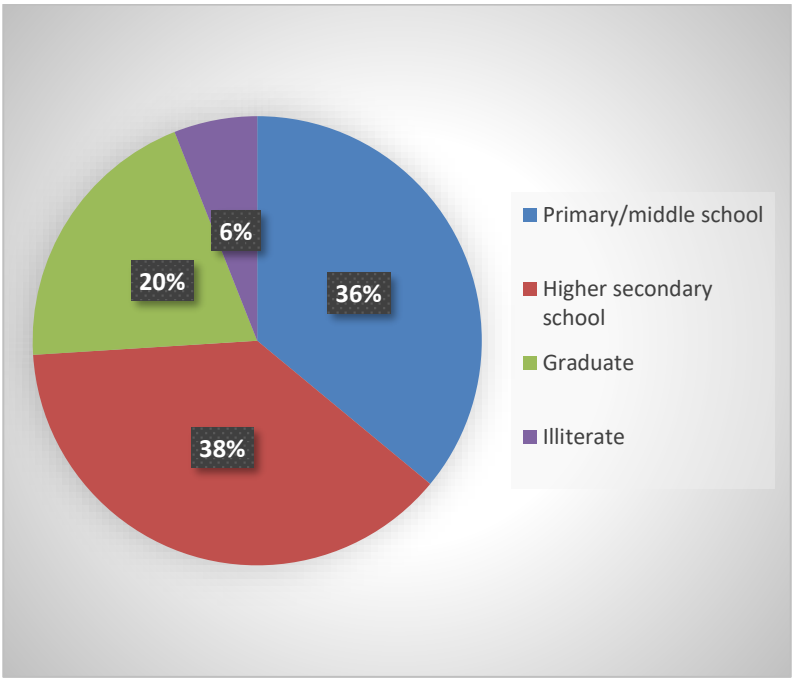

Figure 10 - Frequency and Percentage Distribution of Mother Education

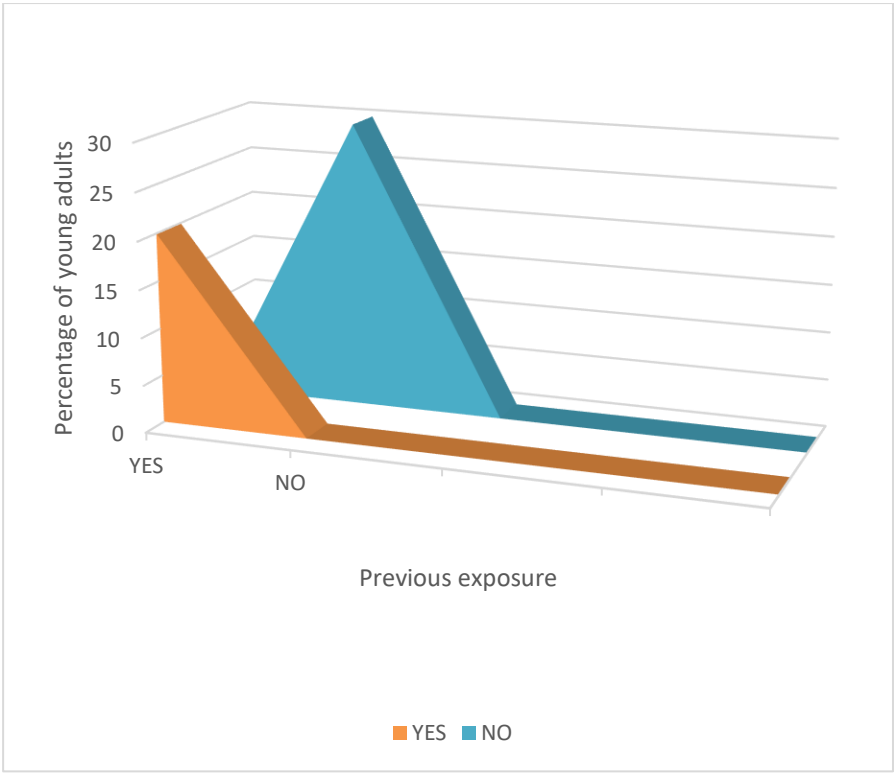

Figure 11 - Frequency and Percentage Distribution of Previous Exposure.

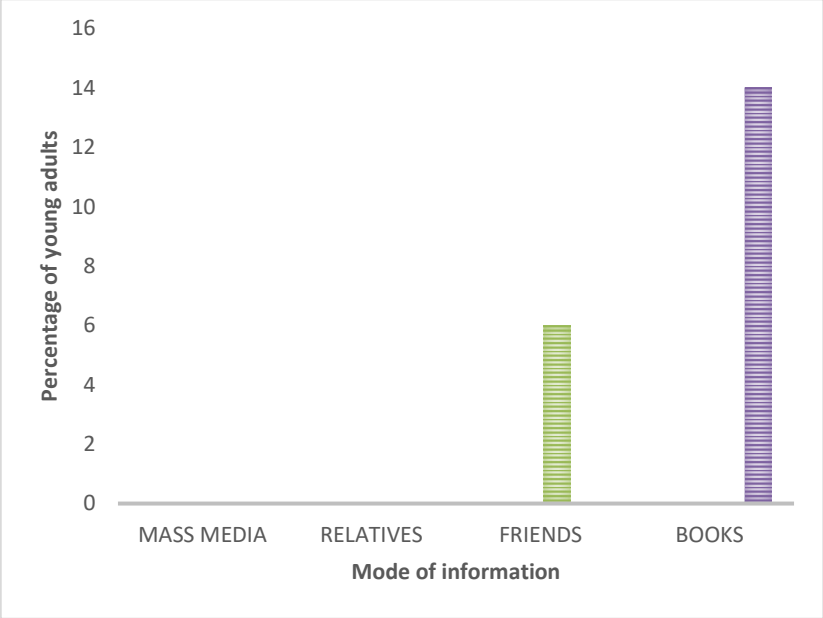

Figure 12 – Frequency and Percentage Distribution of Mode of Information.

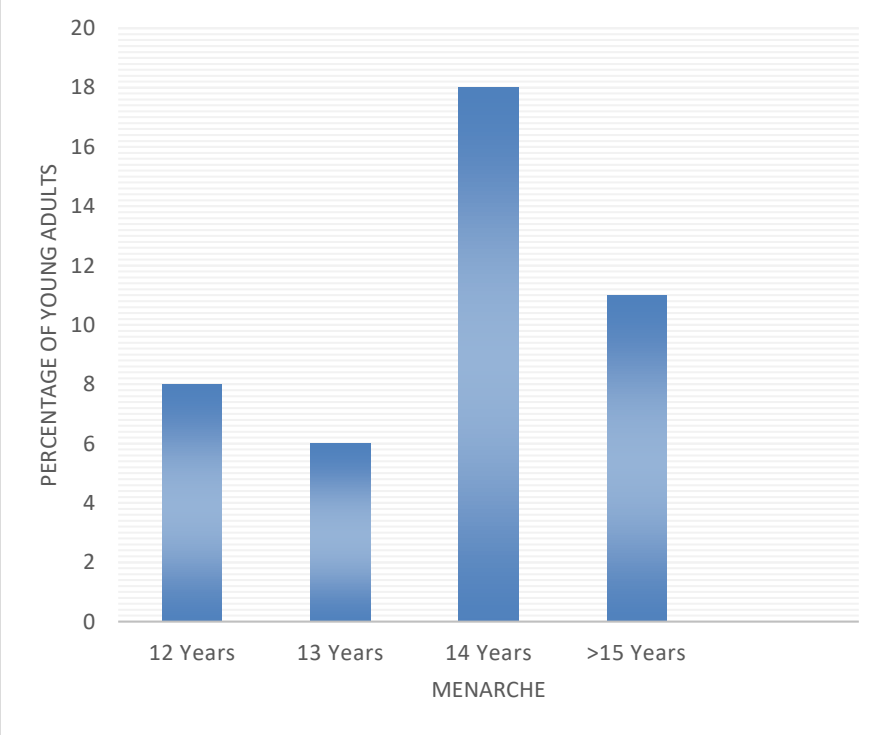

Figure 13 - Frequency and Percentage Distribution of Menarche.

Table 1.4 - Frequency and percentage distribution of Number of menstrual days, Menstruation, Comfortable language to ask doubts.

SL NO	Variables	Frequency	Percentage (%)
1	**Number of menstrual days**		
	3	10	20
	5	25	50
	8	6	12

	>8	2	4
2	**Menstruation**		
	Regular	40	80
	Irregular	3	6
3	**Comfortable language**		
	Kannada	36	72
	English	13	26
	Hindi	1	2

Table 1.4: shows that majority 25(50%) girls have 5 days of menstruation and only 2(4%) have more than 8 days of menstruation. In relation to menstruation 40(80%) have regular menstruation and 3 of girls have irregular menstruation. In relation to the young adults comfortable language to ask doubts regarding PCOD majority 36(72%) are comfortable with Kannada.

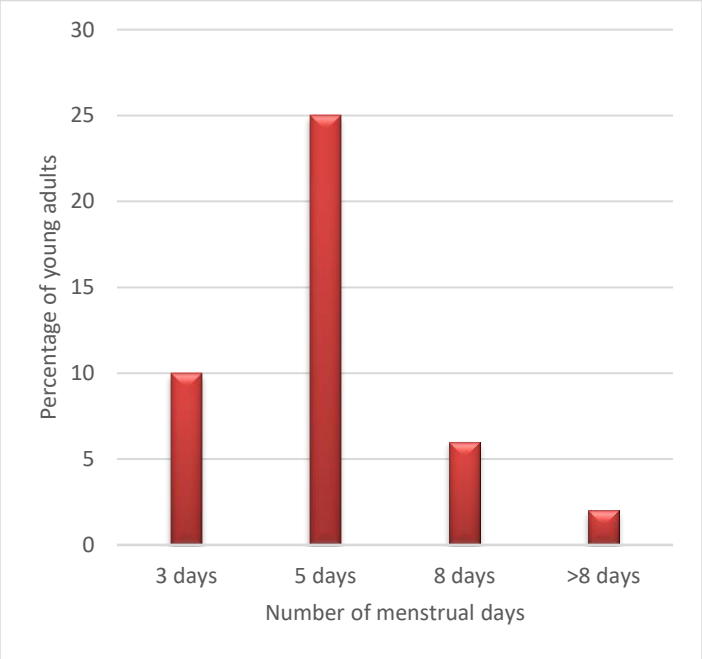

Figure 14 - Frequency and Percentage Distribution of Number of Menstrual Days.

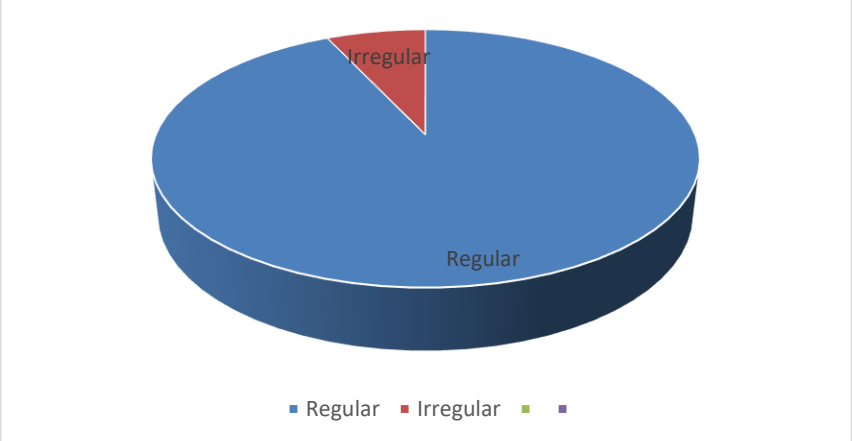

Figure 15 - Frequency and Percentage Distribution of Menstruation.

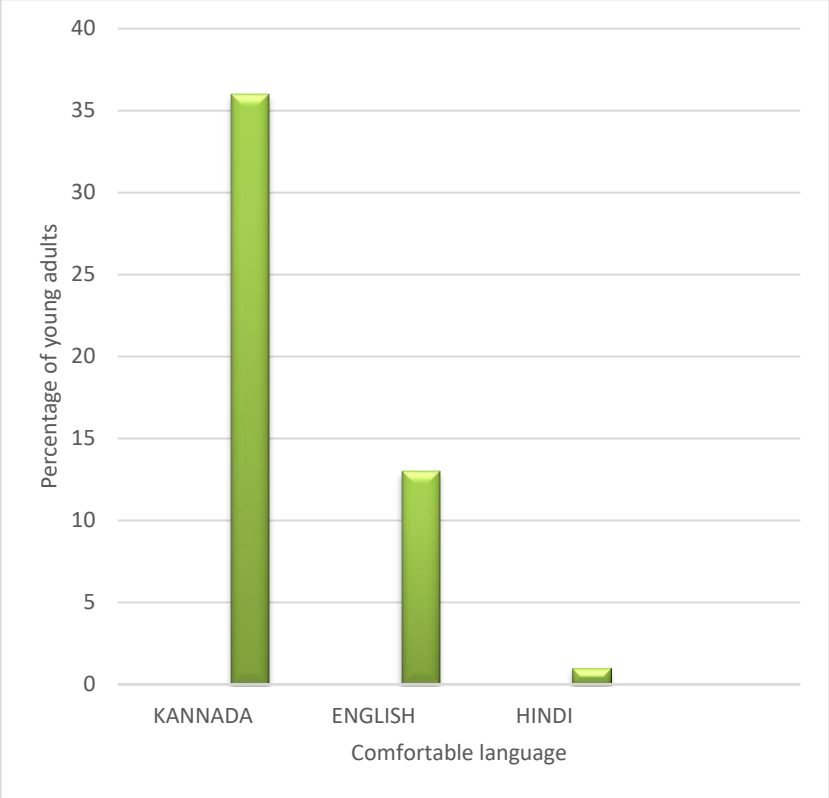

Figure 16 - Frequency and Percentage Distribution of Comfortable Language.

Section II - Knowledge of Young Adults regarding PCOD.

Table 2 - Mean, Mean percentage and standard deviation of pre-test knowledge scores of young adults regarding PCOD.

SL NO	Knowledge variable	Maximum score	Mean	Mean percentage (%)	Standard deviation
1	SECTION 1	4	1.34	33.5	6.231
2	SECTION 2	4	1.2	30	25.75
3	SECTION 3	1	0.34	34	3.081
4	SECTION 4	1	0.36	36	13.12
5	SECTION 5	2	0.9	45	5.604
6	SECTION 6	5	1.22	24.4	7.22
7	SECTION 7	3	0.98	32.6	6.036
	Over all pre-test knowledge score	20	6.34	31.7	67.042

The above **Table 2** shows Mean, Mean percentage and standard deviation of pre-test knowledge scores of young adults regarding PCOD. The overall mean observed in pre-test was 6.34 and Mean percentage of 31.7% whereas standard deviation was found to be 67.042 in pre-test.

Table 3 - Mean, Mean percentage and standard deviation of post-test level of knowledge scores of young adults regarding PCOD.

SL NO	Knowledge variable	Maximum score	Mean	Mean percentage (%)	Standard Deviation
1	SECTION 1	4	3.16	79	3.564
2	SECTION 2	4	2.98	74.5	48.21
3	SECTION 3	1	0.9	90	1.23
4	SECTION 4	1	0.88	88	1.48
5	SECTION 5	2	1.32	66	4.448
6	SECTION 6	5	3.56	71.2	5.93
7	SECTION 7	3	2.5	83.3	4.106
	Over all post-test knowledge score	20	15.3	76.5	68.968

The above **table 3** shows Mean, Mean percentage and standard deviation of post-test knowledge scores of young adults regarding PCOD. The overall mean observed in post-test was 15.3 and Mean percentage of 76.5% whereas standard deviation was found to be 68.968 in post-test.

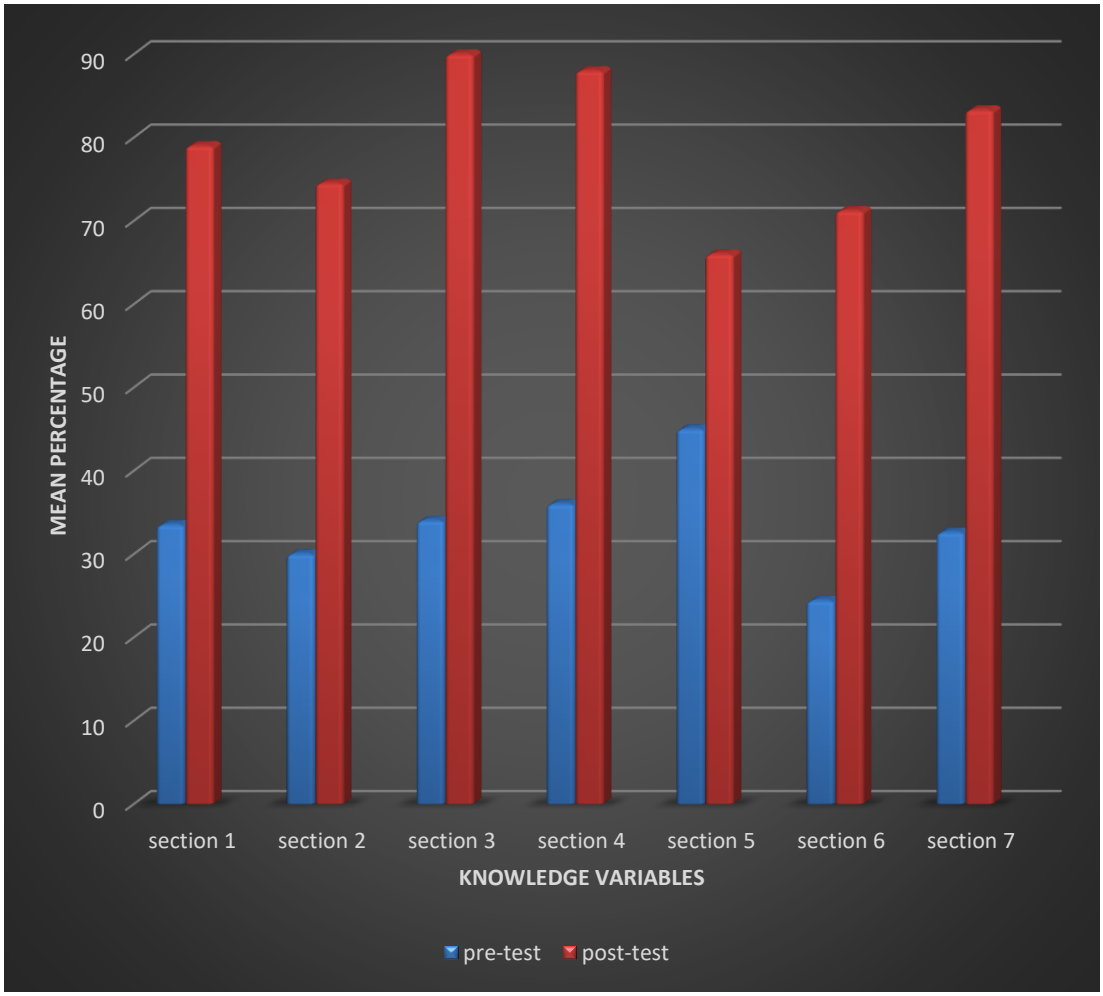

Figure 17 - Mean Percentage of Pre-Test and Post-Test Knowledge.

Table 4: Frequency and percentage distribution of level of knowledge in pre-test

SL NO	Knowledge scores	Frequency	Percentage (%)
1	Inadequate knowledge (<50%)	47	94
2	Average knowledge (50≤ 75%)	3	6
3	Adequate knowledge(>75%)	0	0
	Total	50	100

The table 4 shows the frequency and percentage distribution of level of knowledge in pre-test. Majority 47 (94%) had inadequate knowledge, only 3(6%) had average knowledge and none of the young adults had adequate knowledge in pre-test.

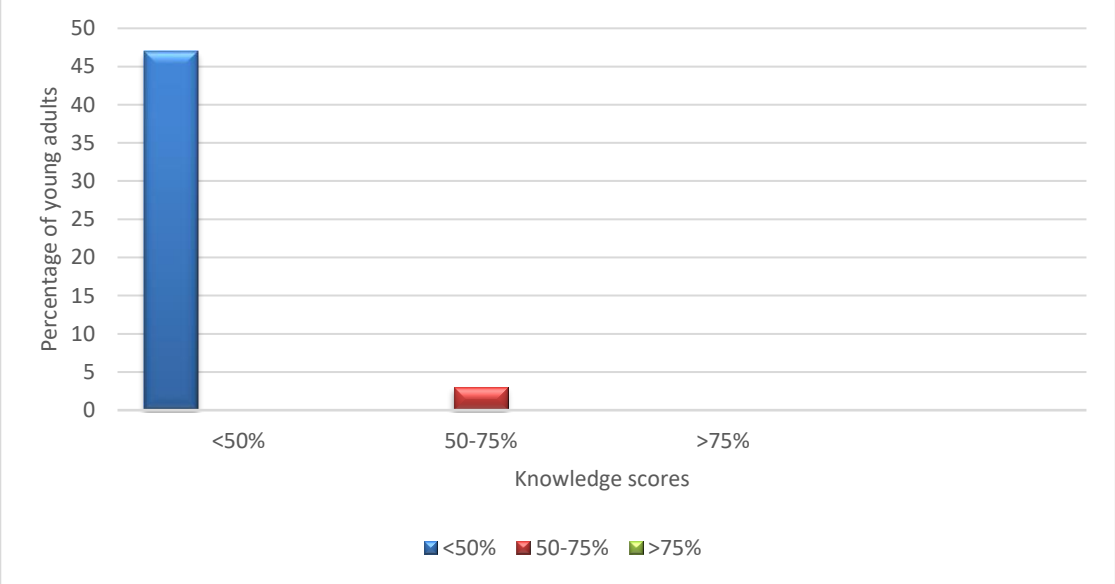

Figure 18 - Frequency and Percentage Distribution of Level of Knowledge in Pre-Test.

Table 5 - Frequency and percentage distribution of level of knowledge in post-test.

SL NO	Knowledge scores	Frequency	Percentage(%)
1	Inadequate knowledge (<50%)	1	2
2	Average knowledge (50≤ 75%)	27	54
3	Adequate knowledge (>75%)	22	44
	Total	50	100

The table 5 shows the frequency and percentage distribution of level of knowledge in pre-test. Majority 27(54%) had adequate knowledge, 22(44%) had adequate knowledge and only 1 of the young adults had inadequate knowledge in post-test. This shows that there is an improvement in the level of knowledge.

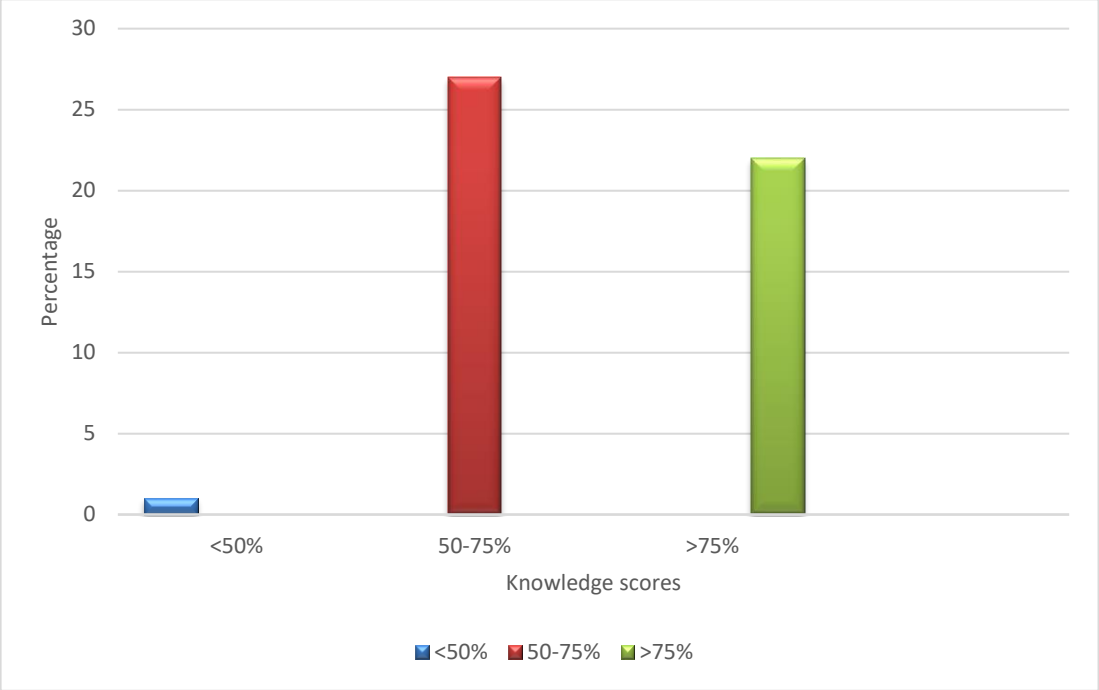

Figure 19 - Frequency and Percentage Distribution of Level of Knowledge in Post-Test.

Table 6 - Effectiveness of Video Assisted Teaching Programme regarding PCOD among Young Adults.

n=50

SL NO	Knowledge variables	Pre-test	Post-test	D	Paired "t" value
1	SECTION 1	1.34	3.16	1.82	2.42
2	SECTION 2	1.2	2.98	1.78	
3	SECTION 3	0.34	0.9	0.56	
4	SECTION 4	0.36	0.88	0.52	
5	SECTION 5	0.9	1.32	0.42	
6	SECTION 6	1.22	3.56	2.34	
7	SECTION 7	0.98	2.5	1.52	
				8.96	

The above table 6 projected the 't' value. The 't' value obtained was 2.42 and the 't' tabular value is 1.684. The calculated 't' value is more than the table value and found to be statistically significant at $p \leq 0.05$ level of confidence. It revealed that there is an enhancement of knowledge indicating the effectiveness of Video Assisted Teaching Program regarding early identification and management of PCOD. Hence the null hypothesis H_{01} – stated that there is no significant difference in the level of knowledge between pre-test and post-test scores among young adults regarding early identification and management of PCOD is rejected.

Section III - Association between Pre-Test Level of Knowledge and selected Socio-Demographic variables.

Table 7.1 - Association between pre-test level of knowledge and socio-demographic variables like Age, Religion, Family structure, Locality.

SL NO	SOCIO-DEMO-GRAPHIC VARIABLES	CATEGORIES	LEVEL OF KNOWLEDGE			CHI SQUARE VALUE
			POOR	AVER-AGE	ADE-QUATE	
1	Age(years)	16-18	2	1	0	5.26
		19-20	30	1	0	NS
		21-22	13	2	0	
		23-24	1	0	0	
2	Religion	Hindu	45	4	0	0.088
		Muslim	0	0	0	NS
		Christian	1	0	0	
		Others	0	0	0	
3	Family structure	Single parent	1	0	0	0.9529
		Nuclear	37	4	0	NS
		Joint	8	0	0	
		Extended	0	0	0	
4	Locality	Rural	34	2	0	1.042
		Urban	12	2	0	NS

NS : Not significant at p-value≤ 0.05 level of significance.

The above table 7.1 - The calculated chi square value is less than the table value for all socio-demographic variables at p≤0.05 level of significance. Hence the null hypotheses stated H_{02} stated that, there is no significant association between pre-test level of knowledge and selected socio-demographic variables is accepted.

Table 7.2 : Association between pre-test level of knowledge and socio-demographic variables like Marital status, Year of study, Socio-economic status, Father education.

Si No	Socio-Demographic Variables	Categories	Level Of Knowledge			Chi Square Value
			POOR	AVERAGE	ADEQUATE	
5	Marital status	Married	1	0	0	0.088
		Single	45	4	0	NS
6	Year of study	1st Year Bsc(N)	12	0	0	12.77
		2nd Year Bsc(N)	12	0	0	S
		3rd Year Bsc(N)	12	0	0	
		4th Year Bsc(N)	10	4	0	
7	Socio-economic Status	Upper	0	1	0	11.784
		Middle	45	3	0	S
		Lower	1	0	0	
8	Father education	Primary/Middle	24	0	0	26.70
		Higher Second-ary	5	0	0	S
		Graduate	3	4	0	
		Illiterate	14	0	0	

N S : Not significant at p-value≤ 0.05 level of significance.

S : Significant at p-value≤ 0.05 level of significance

The above table 7.2 - The calculated chi square value is more than the table value for all socio-demographic variables except marital status at p≤0.05 level of significance. Hence the null hypotheses stated H_{02} stated that, there is no significant association between pre-test level of knowledge and selected socio-demographic variables is accepted only for marital status. There is a significant association between pre-test level of knowledge and demographic variables like Year of study, Socio-economic status, Father education.

Table 7.3 - Association between pre-test level of knowledge and socio-demographic variables like Mother education, Previous exposure, Mode of information, Menarche.

SI NO	SOCIO-DEMOGRAPHIC VARIABLES	CATEGORIES	LEVEL OF KNOWLEDGE			CHI SQUARE VALUE
			POOR	AVERAGE	ADEQUATE	
9	Mother education	Primary/Middle	24	0	0	26.70
		HigherSecondary	5	0	0	S
		Graduate				
		Illiterate	3	4	0	
			14	0	0	
10	Previous Exposure	Yes	14	4	0	7.728
		No	12	0	0	S
11	Mode of information	Mass media	0	0	0	0.33
		Relatives	0	0	0	NS
		Friends	6	2	0	
		Books	18	2	0	
12	Menarche (Years)	12	6	0	0	1.86
		13	6	1	0	NS
		14	9	2	0	
		>15	15	1	0	

NS : Not significant at p-value≤ 0.05 level of significance.
S : Significant at p-value≤ 0.05 level of significance.

The above table 7.3 - The calculated chi square value is more than the table value for all socio-demographic variables except mode of information and age of menarche at p≤0.05 level of significance. Hence the null hypotheses stated H_{02} stated that, there is no significant association between pre-test level of knowledge and selected socio-demographic variables is accepted for mode of information and age of menarche. There is a significant association between pre-test level of knowledge and demographic variables like Mother education and Previous exposure.

Table 7.4 - Association between pre-test level of knowledge and socio-demographic variables Number of menstrual days, Menstruation, Comfortable language.

Si No	Socio-Demographic Variables	Categories	Level Of Knowledge			Chi Square Value
			POOR	AVER-AGE	ADE-QUATE	
13	Number of men-strual days	3 5 8 >8	11 5 20 1	2 1 0 0	0 0 0 0	3.59 NS
14	Menstruation	Regular Irregular	14 22	2 2	0 0	0.184 NS
15	Comfortable language	Kannada English Hindi	5 36 5	2 1 1	0 0 0	6.02 NS

N S : Not significant at p-value≤ 0.05 level of significance.

The above table 7.4 : The calculated chi square value is less than the table value for all socio-demographic variables at p≤0.05 level of significance. Hence the null hypotheses stated H_{02} stated that, there is no significant association between pre-test level of knowledge and selected socio-demographic variables is accepted.

Discussion

This chapter deals with the discussions in accordance with the objectives of the study and the hypotheses. The statement of the problem was "To study the effectiveness of Video Assisted Teaching Program on knowledge regarding early identification and management of PCOD among young adults of Sanjay Gandhi College of Nursing, Bangalore".

The first objective was to assess the pre-test level of knowledge regarding early identification and management of PCOD.

Findings revealed that the majority of the young adults 47(94%) had inadequate knowledge, 3(6%) of the subjects had average knowledge, and none of them had adequate knowledge in the pre-test.

The second objective was to determine the effectiveness of Video Assisted Teaching Programme on early identification and management of PCOD by comparing pre-test and post-test knowledge scores.

The overall improvement mean 8.96, mean percentage was 44.73%, standard deviation 1.926, and 't' value was 2.42. The difference found to be statistically significant at p< 0.01 level of confidence. It revealed that there is an enhancement of knowledge indicating the effectiveness of Video Assisted Teaching Program on early identification and management of PCOD. Hence the null hypotheses H_{01} – stated that there is no significant difference between pre-test and post-test level of knowledge of young adults regarding early identification and management of PCOD is rejected.

Objective-3: To find out the association between pre-test level of knowledge and selected socio demographic variables.

In order to determine the significant association of pre-test knowledge scores with selected variables, chi-square test was used.

The chi-square analysis showed that the computed chi-square values was less than table value at p-value <0.05 in all the areas except year of study, socio-economic status, father education, mother education, previous exposure where the calculated chi-square value is more than the table value at p-value< 0.05, which was found to be having association with the pre-test level of knowledge. Hence the null hypotheses H_{02} stated that, there is no significant association between pre- test level of knowledge and selected socio-demographic variables is accepted in all areas, except in terms of year of study, socio-economic status, father education, mother education, previous exposure.

Conclusion

This chapter deals with the conclusion, implications, recommendations and limitations drawn for the study to study the effectiveness of Video assisted Teaching Program on knowledge regarding early identification and management of PCOD among young adults of Sanjay Gandhi College Of Nursing, Bangalore.

The present study assessed the level of knowledge of young adults regarding early identification and management of PCOD and found that 47(94%) of the young adults had inadequate knowledge, 3(6 %) had average knowledge and none of the young adults had adequate knowledge in pre-test.

Study concludes that majority of the young adults 27(54%) had average knowledge, 22(44%) had moderately adequate and only one of the young adults had inadequate knowledge in posttest. Hence the Video Assisted Teaching Program was effective in improving the knowledge of young adults on early identification and management of PCOD. There was no significant association between pre-test level of knowledge and selected socio-demographic variables except year of study, socio-economic status, father education, mother education, previous exposure.

Nursing Implications

The study findings have several implications in the field of nursing service, Nursing education, Nursing administration and nursing research.

Nursing service

- Awareness about knowledge on PCOD should be well emphasized among nursing students.
- Findings of the study can be the platform for nurses to plan and implement programs to reduce the complications.

Nursing education

- Prepare student nurses with adequate knowledge about side effects of PCOD.
- Nursing educators can provide information regarding the prevalence of PCOD and its complications.

Nursing administration

- The study findings can be used to organize in service education and orientation programmes to

update the knowledge in the prevalence of PCOD.

- Nursing administration should implement out reach programmes to make the nursing students aware about the prevalence of PCOD and its complications.

Nursing research

- The study helps the nurse researchers to understand about the prevalence of PCOD among young adults.
- The investigators can use the methodology as a reference material; as it provides a venue for further studies in this area.

Limitations

- The study was limited to 50 samples.
- The study was limited to young adults who are studying in Sanjay Gandhi College Of Nursing, Bangalore.
- The present study only assessed the knowledge of PCOD among young adults.

Recommendations

- Similar study can be replicated with a larger sample in order to generalize the data.
- Similar study can be conducted with different teaching strategies.
- Similar study can be carried out among other young adults.
- Similar study can be carried out in general population along with different teaching programs to evaluate the effectiveness of such programs.

Summary

PCOD is a disorder affecting women at their reproductive age and manifested by hyperandrogenism, polycystic ovaries, and anovulation which leads to infertility. It is considered as a serious health problem and it should be prevented as early as possible by various health teaching to young adults to keep them fit and should be aware and should gain adequate knowledge regarding this disease condition. We need more research to safeguard our human population from this reproductive disorder. It is vital that research evidence is translated to knowledge and action among young adults of all age groups especially starts from adolescent girls, health care professionals, and policymakers.

The Objectives of the study were

- To assess the Pre-test knowledge scores of young adults regarding early identification and management of PCOD.
- To determine the effectiveness of Video Assisted Teaching Program on early identification and management of PCOD by comparing pre-test and post- test knowledge scores.
- To find out the association between pre-test knowledge scores with the selected socio- demographic variables.

Null Hypotheses

H_{01}: There is no significant difference in the level of knowledge between pre-test and post-test scores

among young adults regarding early identification and management of PCOD.

H_{02}: There is no significant association between pre-test level of knowledge and their selected socio-demographic variables among young adults regarding early identification and management of PCOD.

Assumptions

- There is a significant difference in the level of knowledge between pre-test and post-test scores among young adults regarding early identification and management of PCOD.
- There is significant association between pre-test level of knowledge and their selected socio-demographic variables among young adults regarding early identification and management of PCOD.

The Tool used in the present study consists of:

Section A - Consists of selected demographic variables such as age, religion, family structure, locality, marital status, year of study, socio-economic status, father education, mother education, previous exposure, mode of information, menarche, number of menstrual days, menstruation, comfortable language.

Section B - Consists of 20 self- structured knowledge questionaries.

The tool along with the statement of the problem, objectives was submitted for validation to three experts of Sanjay Gandhi College of Nursing, Bangalore. Based on the expert's opinion, some of the questions were modified and some of the questions were deleted. The tool was presented and finalized by our research guide. Reliability of the tool was established using aplit-half method. The calculated 'r' value for structured knowledge questionnaires was 0.91. The pilot study was conducted to find the practicability and feasibility of the study. The pilot study was conducted at Sanjay Gandhi College of Nursing Bangalore. The samples for pilot study were 10 young adults aged between 18 to 22 years who are studying in Sanjay Gandhi College Of Nursing Bangalore. Young adults were selected using probability simple random sampling technique. The study found to be feasible. No modifications were made in the tool or methodology after the pilot study. So, the researchers proceeded for the Main study with sample size of 50. The obtained data was analyzed in terms of objectives and hypotheses using descriptive and inferential statistics.

Findings of the study

Findings revealed that the majority of the young adults 47(94%) had inadequate knowledge, 3(6%) of the subjects had average knowledge, and none of them had adequate knowledge in the pre-test. The overall improvement Mean 8.96, Mean Percentage was 44.73%, Standard Deviation 1.926, and 't' value was 2.42. The difference found to be statistically significant at $p< 0.01$ level of confidence. It revealed that there is an enhancement of knowledge indicating the effectiveness of Video Assisted Teaching Program on early identification and management of PCOD. Hence the null hypotheses H_{01} – stated that there is no significant difference between pre-test and post-test level of knowledge of young adults regarding early identification and management of PCOD is rejected. In order to determine the significant association of pre-test knowledge scores with selected variables, chi-square test was used.

The chi-square analysis showed that the computed chi-square values was less than table value at p-value <0.05 in all the areas except year of study, socio-economic status, father education, mother education,

previous exposure where the calculated chi-square value is more than the table value at p-value< 0.05, which was found to be having association with the pre-test level of knowledge. Hence the null hypotheses H_{02} stated that, there is no significant association between pre- test level of knowledge and selected socio-demographic variables is accepted in all areas, except in terms of year of study, socio-economic status, father education, mother education, previous exposure.

Study concluded that there is enhancement of knowledge after Video Assisted Teaching Program as there is a significant difference between the pre-test and post-test knowledge scores.

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